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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/749,425 | 12/31/2003 | Sreenivas Subramoney | 30320/17231 | 9579 |
| 4743 | 7590 | 08/14/2008 | EXAMINER | |
| MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606 | | | | PORTKA, GARY J |
| ART UNIT | | PAPER NUMBER | | |
| 2188 | | | | |
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| | | | 08/14/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/749,425 | SUBRAMONEY ET AL. | |
| | Examiner | Art Unit | |
| | Gary J. Portka | 2188 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 June 2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3,4,7,8,11-15 and 17-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1,3,4,7,8,11-13 and 19-21 is/are allowed.
 6) Claim(s) 14,15 and 17 is/are rejected.
 7) Claim(s) 18 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 11, 2008 has been entered.
2. Claims 2, 5, 6, 9, 10, and 16 have been canceled. Claims 1, 3-4, 7-8, 11-15, and 17-21 are pending.

Response to Arguments

3. Applicant's arguments with respect to all claims have been considered, and are persuasive with regard to claims 1, 3-4, 7-8, 11-13, and 19-21.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 recites that optimizing the memory heap comprises blocking memory regions including the threshold value. However, claim 14, from which it depends, recites optimizing comprises performing a garbage collection on the region including the threshold value. It is unclear how a garbage collection could be done on a

region that is blocked, or if claim 15 intends the blocking to be done subsequent to the garbage collection, or instead of it. The relevant paragraph of the specification 0042 is not enlightening in this regard, as it states "Additionally, in an alternative embodiment ...", which could mean the block is done additionally to, or instead of, the garbage collection.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by McNutt et al., US 5,799,324 (hereinafter “McNutt”).

8. As to claim 14, McNutt discloses *a method comprising within a central processing machine, identifying load miss memory addresses from a memory heap including a plurality of memory regions* (col. 9 lines 29-34 and 47-53, also col. 5 line 64 to col. 6 line 15), *maintaining a frequency count for the identified load miss memory addresses* (col. 10 lines 11-16 and 41-52), *determining if the frequency count or percentage of load miss memory addresses for any of the plurality of memory regions has reached a threshold value of load miss memory addresses* (col. 10 lines 53-65, col. 12 lines 16-39), *optimizing the memory heap in response to a determination that at least*

one of the plurality of memory regions includes a threshold value of load miss memory addresses, where optimizing the memory heap comprise performing a garbage collection on at least one of the memory regions including the threshold value of load miss memory addresses (col. 11 lines 14-26, and col. 14 lines 4-11 and 20-30, where optimizing may be considered as including the simultaneously processes of migrating data between regions and garbage collecting, these processes in response to both read misses of the regions as well as elapsed time period).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNutt, in view of the admitted prior art.

11. As to claim 17, McNutt does not disclose selecting the garbage collection from the recited group. However, Applicant has admitted as prior art that such garbage collection methods were known, and that at least one was popular and useful for object oriented applications. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to select from the recited garbage collection methods, because these were known in the art and included popular and useful methods.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary J Portka/
Primary Examiner
Art Unit 2188